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## Metric Notation

In 1979 the petroleum and natural gas industry in Canada will convert to the metric system for recording operations. A conversion table is enclosed with this report for shareholders' convenience.

## 10K Report

A copy of the Company's 10-K report filed with the United States Securities and Exchange Commission will be sent to any registered shareholder upon written request to the Company Secretary.

## Executive and Registered Office

4600 Toronto-Dominion Centre  
Toronto, Ontario M5K 1E5

Norcen Energy Resources Limited is a 92.9% Canadian owned integrated energy resource company engaged in the exploration, production and transportation of oil, natural gas and coal in Canada, and in the search for minerals in Canada and hydrocarbons in other areas of the world. Through subsidiaries, Norcen operates natural gas distribution systems in Quebec, Ontario, Manitoba and British Columbia.

## Common Share Market Information

1978	High	Low	Close	Shares outstanding (000's)	Shares traded (000's)	Dividend paid
First quarter	\$19 $\frac{1}{8}$	\$14 $\frac{5}{8}$	\$15 $\frac{3}{4}$	22,775	3,939	\$0.18
Second quarter	17 $\frac{1}{2}$	14 $\frac{3}{4}$	15 $\frac{1}{4}$	22,793	2,565	0.18
Third quarter	18 $\frac{1}{4}$	15	17	22,807	2,461	0.18
Fourth quarter	19 $\frac{1}{2}$	14 $\frac{7}{8}$	18	22,903	3,712	0.18
Year	\$19 $\frac{1}{2}$	\$14 $\frac{5}{8}$	\$18	22,903	12,677	\$0.72
1977	\$19 $\frac{1}{8}$	\$10 $\frac{1}{2}$	\$19	22,726	13,067	\$0.72

Common shares and options on common shares are listed for trading on the Toronto and Montreal Stock Exchanges.

## Annual Meeting

The annual meeting of shareholders will be held at the Commerce Hall, Commerce Court West, King and Bay Streets, Toronto, Ontario, on Tuesday, April 10, 1979, at 10:00 a.m. local time. Shareholders are encouraged to attend the meeting, but those unable to do so, are asked to sign and return the form of proxy mailed with this report.



### Six Months' Earnings

Basic earnings per common share were \$1.30 for the six months ended June 30, 1978, up from \$1.16 in the previous year. Earnings per share on a fully diluted basis were \$1.26 as against \$1.04 in 1977. Income applicable to common shares for the six months ended June 30, 1978 was \$29,609,000 an increase of 27% over \$23,281,000 for the first half of 1977. Average number of common shares outstanding increased from 20,013,000 in 1977 to 22,779,000 in the first half of 1978. Sales and other revenues increased to \$408,446,000 from \$335,170,000 a year ago.

### Oil and Gas

For the six months ended June 30, 1978 income from the oil and gas operations increased to \$15,140,000 from \$13,615,000 in the first half of 1977.

Gross production of oil and natural gas liquids averaged 23,000 barrels per day as against 24,000 barrels per day in the first half of 1977. Gross natural gas production in the current period averaged 164.3 MMcf per day, down from 180.4 MMcf per day in the first half of 1977, due principally to cutbacks in demand by gas shippers. Average prices before royalties for oil and natural gas at the wellhead increased from \$9.12 per barrel and \$1.04 per Mcf in the first half of 1977 to \$11.11 per barrel and \$1.30 per Mcf in 1978.

To date in 1978 Norcen has participated in the drilling of 64 exploratory and 33 development wells, resulting in 37 gas and 16 oil discoveries.

In the West Pembina area of Alberta on lands in which the Company has a 50% interest, the well Chevron NorcenPL Brazeau 5-6-49-12W5 was recently drilled as an indicated oil success from the Nisku formation and a second well, Chevron NorcenPL WestPem 5-14-49-13W5, is currently drilling towards its objective in the Nisku. The Company has recently made its second Nisku oil discovery in the Bigoray area on lands in which Norcen owns a 75% interest.

During June 1978, Norcen as manager-operator of a uranium joint venture group resumed drilling on the Blizzard property located near Beaverdell, British Columbia. Two diamond coring units and one rotary drilling unit are being used to pattern drill on 30 meter centres in order to delineate the mineralized zone and determine the magnitude of uranium reserves. Preliminary metallurgical testing has been initiated and environmental studies continue. Norcen has the right to earn a 28% interest in the properties.

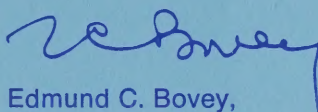
### Gas Utilities

Income from the gas utilities increased to \$15,138,000 in the current period from \$11,543,000 in the first six months of 1977, reflecting higher sales volumes as well as increases in rates approved by the various regulatory agencies.

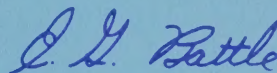
Gas sales volumes in the first half of 1978 were 149.3 Bcf compared with 139.3 Bcf a year ago. The weather across the franchised area was 5% colder than normal and 13% colder than during the first half of 1977.

### Financing

In May 1978 Northern and Central Gas completed the issue and sale, by way of private placement in Canada, of \$20 million 10½% first mortgage bonds due 1998, with the proceeds applied to reduce short-term debt of the gas utilities. No further long-term financing is planned for the remainder of 1978.



Edmund C. Bovey,  
Chairman



Edward G. Battle,  
President

August 4, 1978

AR18

**Norcen**  
Energy Resources Limited

**Executive and Registered Office**  
4600 Toronto-Dominion Centre  
Toronto, Ontario M5K 1E5

**Calgary Office**  
715-5th Avenue S.W.  
Calgary, Alberta T2P 2X7

**London Office**  
1st Floor, Wellington House  
6/9 Upper St. Martin's Lane  
London, England WC2H9DL

**Northern and Central Gas Corporation Limited**  
245 Yorkland Boulevard  
Willowdale, Ontario M2J 1R1

**Gaz Métropolitain, inc.**  
1155 Dorchester Boulevard West  
Montreal, Quebec H3B 3S7

**Greater Winnipeg Gas Company**  
265 Notre Dame Avenue  
Winnipeg, Manitoba R3B 1N9

**Cigas Products Ltd.**  
715-5th Avenue S.W.  
Calgary, Alberta T2P 2X8

**Coleman Collieries Limited**  
Coleman, Alberta T0K 0M0

**Norcen**  
Energy Resources Limited



Comparative Statement of Income

(Unaudited)		(thousands of dollars)	
		6 Months Ended	
		June 30	
		12 Months Ended	
		June 30	
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# Highlights

## Financial

(thousands of dollars, except per share figures)

	1978	1977	Percentage Increase/ (Decrease)
<b>Sales and other revenues</b>	<b>\$775,221</b>	<b>\$646,578</b>	<b>19.9</b>
Natural resources	163,052	154,022	5.9
Gas utilities	612,169	492,556	24.3
<b>Cash flow from operations</b>	<b>\$100,524</b>	<b>\$ 78,302</b>	<b>28.4</b>
Natural resources	62,603	53,284	17.5
Gas utilities	37,921	25,018	51.6
<b>Income contributions</b>	<b>\$ 43,839</b>	<b>\$ 35,060</b>	<b>25.0</b>
Natural resources	28,941	27,866	3.9
Gas utilities	14,898	7,194	107.1
<b>Income applicable to common shares</b>	<b>\$ 42,515</b>	<b>\$ 32,277</b>	<b>31.7</b>
Per common share	<b>\$ 1.86</b>	<b>\$ 1.52</b>	<b>22.4</b>

## Operating

### Oil and gas production

Oil and gas liquids	bbls/day	23,200	23,700	(2.1)
Natural gas	MMcf/day	156	162	(3.7)

### Oil and gas reserves

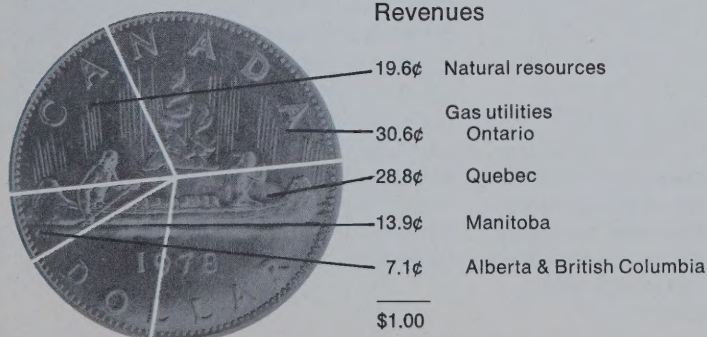
Oil and gas liquids	Mbbls	117,340	109,813	6.9
Natural gas	MMcf	1,019,902	1,016,213	.4

### Gas utilities sales

	MMcf	269,081	254,688	5.7
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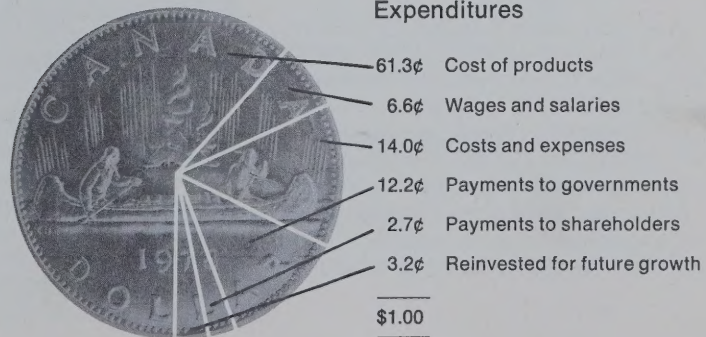
## The sales dollar

### Revenues



## ...and where it went

### Expenditures





# Report to the Shareholders

Substantially improved earnings from the gas utilities and from higher crude oil and natural gas wellhead prices, an increase in oil and gas reserves and the confirmation of economically mineable uranium reserves in British Columbia combined to make 1978 a most satisfactory year for Norcen, and to provide a sound base for continuing earnings improvement in the future.

## Earnings

During the six year period from 1972 to 1978, Norcen's earnings have grown at an average compounded annual rate of 17.4% and for the year ended December 31, 1978, income applicable to common shares increased 32% to \$42,515,000 (\$1.86 per share) from \$32,277,000 (\$1.52 per share) in 1977.

Sales and other revenues increased 20% to \$775,221,000 from \$646,578,000 in 1977.

## Oil and gas

The most significant development of the year was a net increase in crude oil reserves of 7.5 million barrels or 6.9%. Natural gas reserves increased slightly.

During 1978 Norcen participated in the drilling of 214 wells resulting in 46 oil and 83 gas well completions. In the Pembina-Bigoray area of Alberta, the Company has participated in the drilling of a total of 13 Nisku exploratory wells to date of which 6 have been completed as oil wells. Development drilling in the Eagle field in British Columbia also resulted in additional oil reserves. Plans for 1979 include continued exploration and development activities in these two areas of high interest.

Crude oil production totalled 8.5 million barrels compared with 8.7 million barrels in 1977. Natural gas production declined from 59.2 Bcf in 1977 to 56.8 Bcf mainly due to the inability of gas purchasers to take delivery of minimum contract volumes. Amounts collected or receivable for 1978 under "take or pay" agreements, which are not included in income, totalled \$4.2 million. Norcen's earnings would

have increased by 7¢ per share had minimum contract quantities actually been taken.

During 1979, the National Energy Board will hear applications with respect to projects which are being proposed to expand natural gas sales in eastern Canada and to increase exports to the United States. Timely decisions in this regard will enable Norcen to bring shut-in gas reserves into production over the next 2 to 3 years and will provide the necessary incentive for continued exploration of gas-prone acreage. Norcen is one of the sponsors of ProGas Limited, formed to develop new markets for shut-in Alberta gas production. The ProGas concept of short-term exports, followed by long-term commitment of natural gas to eastern Canadian markets, is an option which should be considered seriously by the National Energy Board.

## Gas Utilities

The doubling of the utilities' income in 1978 from 1977 was mainly the result of favourable interim rate decisions, which enabled the utilities to achieve revenues more closely matching current costs of service. During the year the utilities were successful in demonstrating before the regulatory boards the need for higher rates in order to earn a more reasonable overall rate of return, so as to provide an adequate return on capital employed, and ensure the maintenance of a safe and expanding service in the communities they serve.

Notwithstanding some loss of sales due to plant shut-downs as a result of strikes, colder than normal weather across the system and intensive sales efforts resulted in higher volumes of gas sold in 1978 than in 1977.

## Debt-equity ratio

The Company's policy is to achieve a 50:50 debt equity ratio by the early 1980's. At the time of Norcen's formation in 1975, debt was 65.9% of capital employed and by December 31, 1978, this level had been reduced to 58.7%. The improvement has been achieved by internal growth and careful cash flow management. It is

expected that this policy objective will be achieved as planned.

## Common share dividends

Norcen's predecessor, Northern and Central Gas Corporation, commenced paying dividends in 1962. The year 1979 will be the 17th consecutive year in which dividends have been paid. During that time the dividend on common shares has increased from 25¢ per share to 72¢ per share annually.

At the time of Norcen's formation in 1975, a policy was established to pay out in dividends 60% of gas utility income and between 20% and 30% of oil and gas income. This is the equivalent of approximately 35% of Norcen's consolidated income applicable to common shares and that policy is being continued.

## Capital expenditures

Net capital expenditures in 1978 totalled \$91.6 million made up of \$62.4 million for natural resources and \$29.2 million for utilities. For 1979 these figures have been budgeted at a total of \$123 million of which \$81 million is for natural resources and \$42 million for the utilities.

## Outlook for 1979

The general outlook for the energy industry in 1979 is excellent. Further increases bringing Canadian crude oil and natural gas prices closer to world prices will improve wellhead returns. The additional cash flow provided will enable the industry to continue exploration and development of traditional sources of hydrocarbons as well as tar sands and heavy oil deposits, all of which will help to achieve the federal government's stated objective of "energy self reliance" for Canadians.

Alberta, the federal government and the eastern Canada consuming provinces are currently working out details of a natural gas incentive pricing agreement. When combined with the improved natural gas supply situation, this will provide opportunities for the expansion of Canada's gas transmission and distribution network,



making this premium fuel available to more Canadians and thus reducing dependence on imported crude oil. Compatible with this is the probability of sufficient gas reserves to support additional exports which will help to improve the country's balance of payments and reduce the trade deficit.

#### **Directors and management**

During the year Mr. John R. Yarnell was appointed to the Board of Directors. Mr. Yarnell has had many years of service in the energy industry in Canada.

At the time of the annual meeting to be held in April of this year, Mr. Linden J. Richards will have reached retirement age and will not stand for re-election. An experienced, successful and able oil and gas executive, Mr. Richards has made an important contribution to the affairs of the Company since his appointment to the Board of Directors in 1974.

It is with sadness that we record the death during the year of Mr. Blanche Noyes, who served with distinction as a director of the Company and its predecessor, Northern and Central Gas Corporation Limited, since 1960. His wise counsel and dedication to the progress of Norcen will be missed.

In line with Norcen's expanding activities, the Board of Directors in December approved a number of senior management appointments. Mr. Donald D. Barkwell was made Senior Vice-President, Natural Resources and Mr. Jean-J. Leroux was appointed Senior Vice-President, Utilities. Dr. Peter Kaye, formerly Manager of International Exploration in London, England, was made Vice-President, Exploration. Mr. William C. Hennenfent, previously Vice-President, Corporate Planning, was appointed Vice-President, Production and Mr. Wilfrid A. Loucks was made Vice-President, Minerals. Messrs. Barkwell, Kaye, Hennenfent and Loucks are located in Calgary. Mr. William T. Kilbourne became Vice-President,



*Edmund C. Bovey*

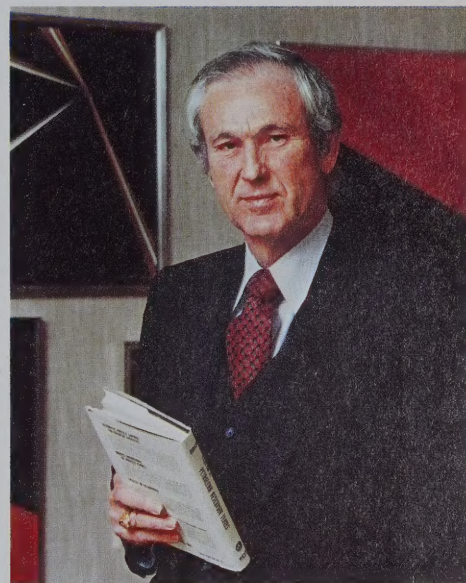
Administration and Secretary; Mr. Paul H. Palmer was made Vice-President, Comptroller and Mr. Barry D. Cochrane was appointed Vice-President, Corporate Planning. Mr. Timothy G. Sheeres continues as Vice-President, Finance.

#### **Summary**

During 1978 Norcen achieved a number of objectives, including higher earnings, additions to oil and gas reserves, improved regulatory rulings, diversification into other forms of energy through the establishment of economic mineable reserves of uranium, and a further reduction in the Company's debt-equity ratio.

In 1979, Norcen's earnings should show further improvement due to increased crude oil production from discoveries made in 1978, higher natural gas deliveries, increased royalties from Athabasca tar sands production and a continuation of the trend established in 1978 towards better returns from utility operations.

The achievements of 1978 and the anticipated progress in 1979 would not have been possible without the skills, dedication, judgment and special effort of the Company's more than 3,000



*Edward G. Battle*

employees engaged in finding, developing, and marketing Norcen's energy products. Their contributions are sincerely appreciated.

On behalf of the Board

A blue ink signature of Edmund C. Bovey.

Edmund C. Bovey  
Chairman

A blue ink signature of Edward G. Battle.

Edward G. Battle  
President

February 20, 1979



# Natural Resources Division

Major items of interest in Norcen's natural resources operations in 1978 included:

continued expansion of activities with gross capital expenditures of \$69.4 million, an increase of 82% over the previous year;

principal domestic oil and gas exploration efforts centred in the Pembina-Bigoray area of west central Alberta where Norcen now has 6 oil completions;

significant extension of the Eagle oil field in north eastern British Columbia resulting from development drilling;

a net increase in the Company's crude oil and natural gas reserves;

discovery of high-grade uranium mineralization on the Company's Blizzard prospect near Kelowna, British Columbia; and

acquisition of 50% of the Canadian interests of Shenandoah Oil Corporation.

## EXPLORATION

### Canada

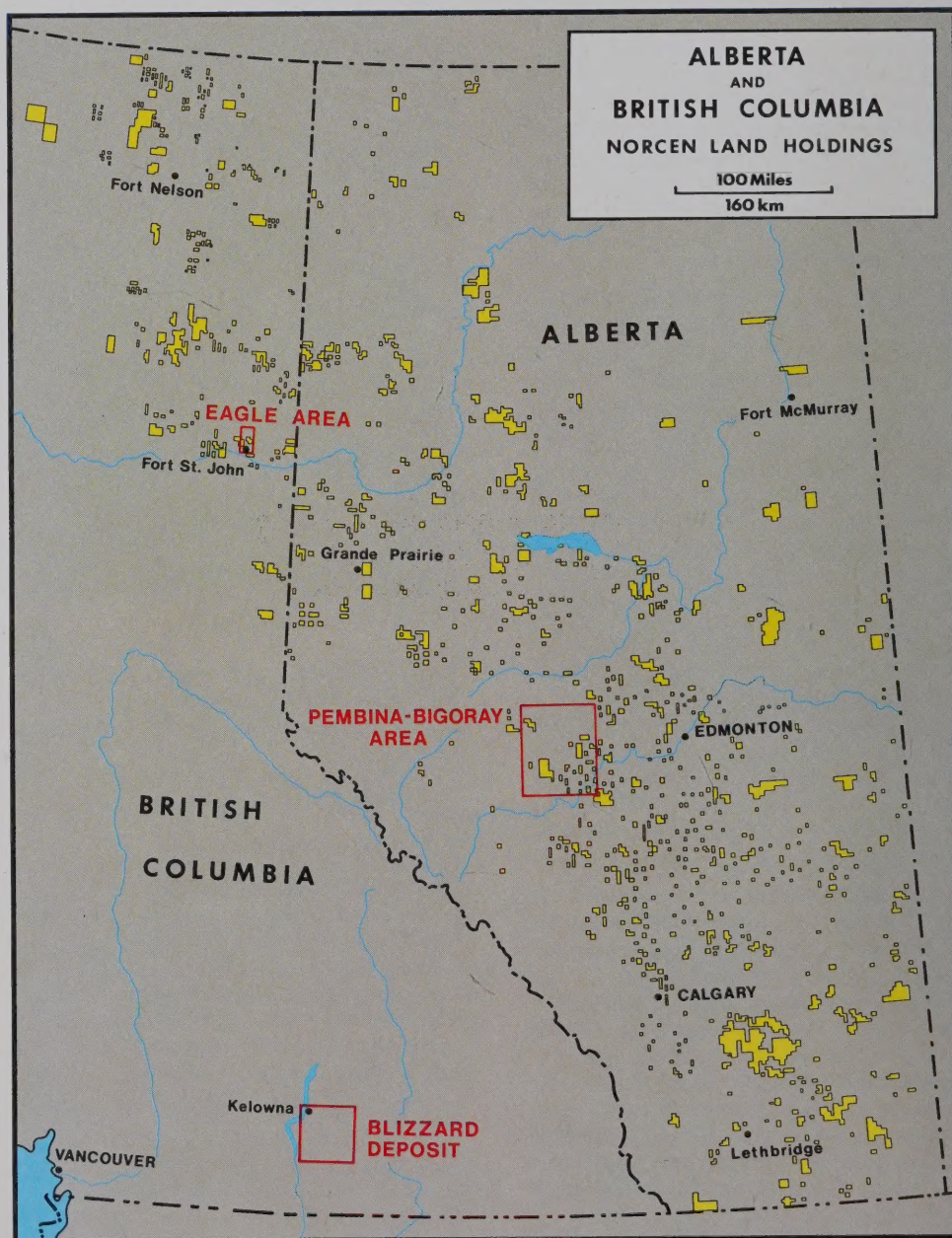
Gross exploration expenditures in 1978 amounted to \$42.6 million compared with \$22.0 million in 1977. Expenditures in 1979 are expected to be \$47 million, a four-fold increase in four years.

Norcen participated in 142 exploratory wells of which 63 were oil or gas discoveries or extensions to existing fields.

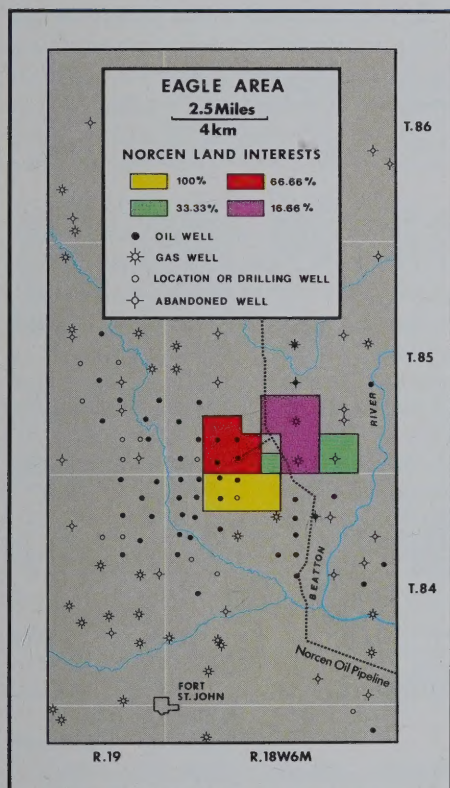
### Canadian Exploratory Wells

	1978		1977	
	Gross	Net	Gross	Net
Oil	18	8.7	11	5.7
Gas	45	10.1	29	9.8
Dry	79	33.7	67	29.2
	142	52.5	107	44.7

Exploration in Western Canada was concentrated in Alberta. The principal areas of activity in the province were Pembina-Bigoray, southern Alberta, and Golden-Cadotte-Seal.



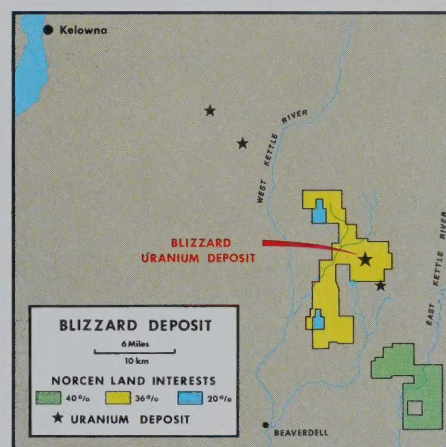




### Canadian Frontier

Norcen participated in 2 exploratory wells in the Arctic Islands and 2 deep test wells in the Beaufort Sea. Three were abandoned, and 1 well in the Beaufort Sea will be tested in the 1979 drilling season.

The Company will participate in 2 wells in the Arctic Islands and 1 well in the Beaufort Sea, in 1979. The latter well, in which Norcen has a 4% interest, will be a 14,000 foot test drilled from a man-made island presently under construction. An additional 2 wells may be drilled in the Beaufort Sea on Company acreage.



The Pembina-Bigoray area is of particular interest. To date, 6 successful wells have been drilled on acreage in which the Company's interests range from 50% to 75%. Oil and gas have been discovered in the Nisku reef formation which has pay zones to approximately 300 feet thick, with production allowables for some wells as high as 1,000 barrels of oil per day. Drilling and seismic will continue in 1979 on the Company's substantial acreage holdings in this area.

In southern Alberta, the Company participated in 49 exploratory wells, resulting in 12 gas and 5 oil wells.

In the Golden-Cadotte-Seal area, the Company participated in 5 exploratory tests, resulting in 1 gas and 1 oil well.



*Drilling Chevron-Norcen well  
in west Pembina*



## International

During 1978, Norcen participated in 4 exploratory wells located offshore north-west Australia, offshore Brazil, the Adriatic Sea, and Tunisia. All failed to discover hydrocarbons in commercial quantities. The Australia well earned the Company varying interests in almost 2.5 million acres. For 1979, additional wells are planned in the offshore Australia and Brazil areas, and a test well is expected to be drilled on the Company's 5th Round block in the U.K. Sector of the North Sea.

## Minerals

Norcen investigated a number of mineral prospects in Canada during the year, and, together with partners, made a significant discovery of high-grade uranium mineralization at the Blizzard property in south central British Columbia, near Kelowna. A detailed evaluation program involving drilling, engineering and environmental studies was carried out. Drilling has indicated total ore reserves of 2,100,000 tonnes averaging .227%  $U_3O_8$ , or an equivalent of 4,767,000 kilograms of uranium oxide. A preliminary feasibility study confirmed the presence of a commercial deposit and evaluation work is continuing. Approvals must be obtained from the provincial and federal governments before mining can be commenced. The Company's undivided interest in the Blizzard project is 36%, subject to a 20% net profits interest to one of the partners.

## Land Holdings

Oil and gas land holdings at December 31, 1978, totalled 6,490,000 net acres in Canada and 2,435,000 net acres in international areas. The Company also owns 213,000 net acres of mineral rights and 56,000 net acres of coal rights.

## DEVELOPMENT AND PRODUCTION

### Development

During the year, the Company participated in 68 development wells resulting in 38

## Oil and Gas Land Holdings

December 31, 1978

	Leases		Reservations, Permits, Concessions and Licences		Total	
	Gross Acres	Net Acres	Gross Acres	Net Acres	Gross Acres	Net Acres
<b>Canada</b>						
Alberta	4,398,000	1,755,000	644,000	379,000	5,042,000	2,134,000
British Columbia	1,036,000	156,000	568,000	213,000	1,604,000	369,000
Saskatchewan	192,000	101,000			192,000	101,000
Manitoba	74,000	21,000			74,000	21,000
Ontario	4,000	2,000	2,000	2,000	6,000	4,000
<b>Canadian Frontier</b>						
Arctic Islands	72,000	2,000	6,810,000	2,323,000	6,882,000	2,325,000
Beaufort Sea			2,771,000	582,000	2,771,000	582,000
Yukon Territory	38,000	2,000	1,707,000	655,000	1,745,000	657,000
North West Territories	171,000	17,000	226,000	36,000	397,000	53,000
Offshore East Coast			725,000	244,000	725,000	244,000
	5,985,000	2,056,000	13,453,000	4,434,000	19,438,000	6,490,000
<b>International</b>						
United States	17,000	1,000			17,000	1,000
North Sea (U.K.)	221,000	32,000			221,000	32,000
Adriatic Sea			20,000	10,000	20,000	10,000
Oman	6,383,000	947,000			6,383,000	947,000
Seychelles	4,062,000	813,000			4,062,000	813,000
Tunisia			3,398,000	453,000	3,398,000	453,000
Australia			2,490,000	104,000	2,490,000	104,000
Brazil			754,000	75,000	754,000	75,000
	10,683,000	1,793,000	6,662,000	642,000	17,345,000	2,435,000
	16,668,000	3,849,000	20,115,000	5,076,000	36,783,000	8,925,000

In addition to the above, royalty interests are held in 1,072,000 gross acres and net carried interests in 300,000 gross (21,000 net) acres.



Collecting assay samples —  
Blizzard Property



gas and 28 oil wells. Expenditures of approximately \$6.8 million were made to maintain production from existing oil and gas fields and a further \$5.8 million to develop reserves not previously connected to market.

In north eastern British Columbia the limits of the Eagle field were extended by the drilling of 7 oil wells in which Norcen's interests are 66% or 100%. Production allowables for these wells range from 80 to 266 barrels of oil per day and a connection to the Company's crude oil pipeline is under construction.

#### Development Wells

	1978		1977	
	Gross	Net	Gross	Net
Oil	28	9.5	33	14.2
Gas	38	10.1	72	22.1
Dry	2	.4	12	4.2
	68	20.0	117	40.5

#### Heavy Oil

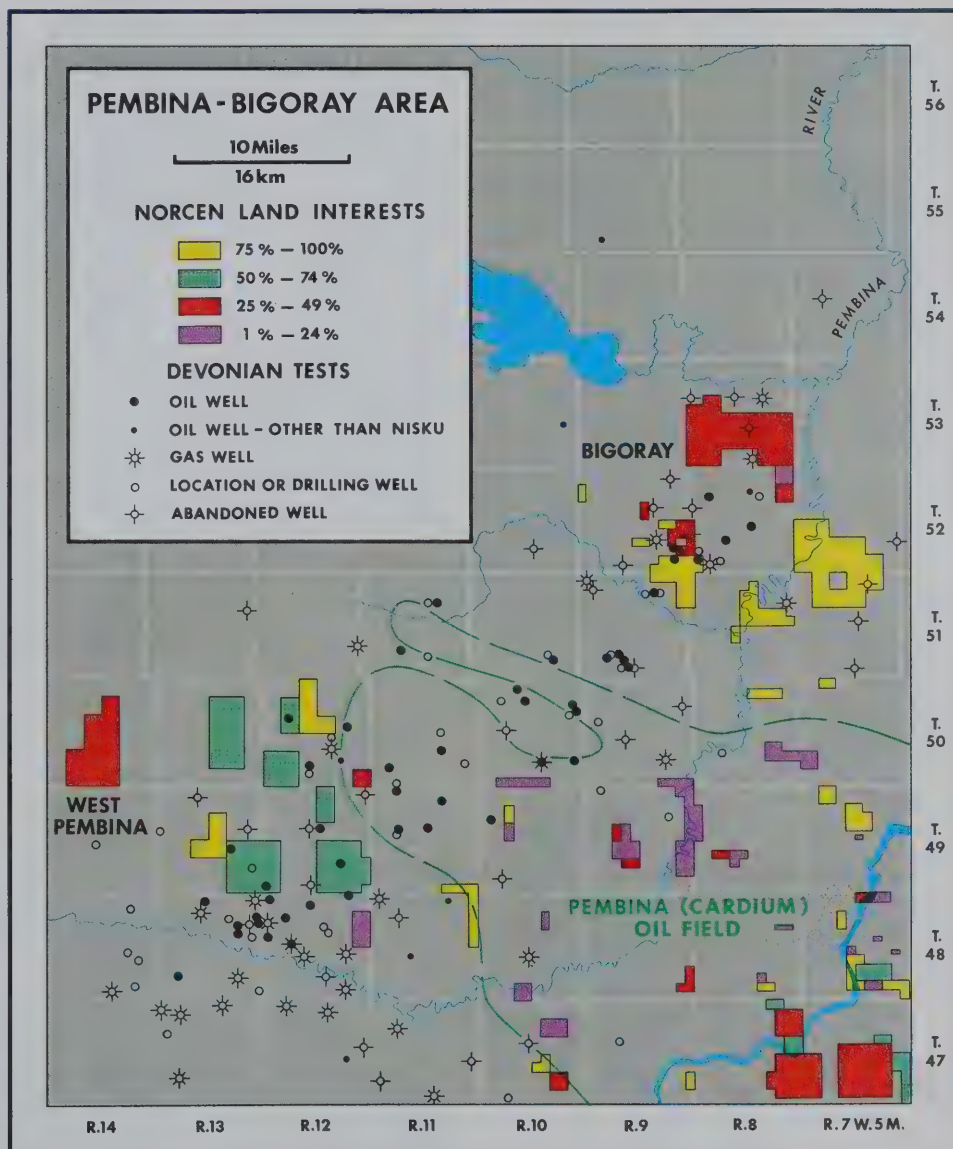
A performance review of the experimental in situ recovery project at Cold Lake, Alberta, was made during 1978 by Company engineers and Japanese partners. The study resulted in the decision to continue the project for at least two more years.

#### Production

##### Crude Oil, Synthetic Crude Oil and Gas Liquids

Average daily production before royalties was 23,200 barrels, compared with 23,700 in 1977. The slight reduction resulted from lower demand for light gravity crude oil due to export restrictions, and from natural decline in older fields.

The price of western Canadian crude oil increased by \$1.00 per barrel on January 1 and July 1, 1978. The average price received by the Company for crude oil production was \$11.67 per barrel compared with \$9.78 in 1977.





### Natural Gas

Gas production before royalties averaged 156 MMcf per day compared with 162 MMcf per day in 1977. The decrease was primarily due to the inability of gas shippers to take delivery of minimum contracted quantities.

As a result of price increases on February 1 and August 1, 1978, the average price received by the Company for gas sold was \$1.31 compared with \$1.11 per Mcf in the preceding year.

### Acquisition

In late 1978 and early 1979, Norcen and its subsidiary, Prairie Oil Royalties Company, Ltd., with a partner, acquired all of the Canadian oil and gas assets of Shenandoah Oil Corporation for a total consideration of \$47.3 million. These assets, in which Norcen and Prairie each has a 25% interest, include producing properties in Alberta, British Columbia, Saskatchewan and Ontario, and exploratory acreage in western Canada.

### Reserves

Estimated reserves, before royalties, of crude oil, synthetic crude oil and gas liquids, at December 31, 1978 were 117.3 million barrels compared with 109.8 million barrels at the end of the previous year. Estimated reserves of natural gas, before royalties, were 1,019.9 billion cubic feet, compared with 1,016.2 billion cubic feet.

These figures do not include the Company's share of reserves of natural gas in the Arctic Islands, Beaufort Sea and the North Sea, and heavy oil reserves at Cold Lake, Alberta.

### Oil Gathering and Transmission

An average of 73,600 barrels per day was transported through the Company's systems in 1978, compared with 80,500 barrels per day in 1977. Proven and probable reserves supporting these systems are estimated at 677 million barrels.

### Crude oil, synthetic crude oil and gas liquids production

(Barrels per day before royalties)

	1978	1977
<b>Alberta</b>		
Countess Lathom	3,444	3,655
Pembina	3,196	3,436
Golden	1,255	1,312
Swan Hills	890	877
Joarcam	671	729
Harmattan	578	627
Simonette	559	597
Bigoray	759	503
Hamilton Lake	443	467
Drumheller	555	361
Others	3,316	3,550
Synthetic Crude	1,553	1,123
Gas Liquids	2,973	3,386
	20,192	20,623
<b>Saskatchewan</b>		
Weyburn	486	512
Others	1,185	1,252
Royalty Interests	686	655
	2,357	2,419
<b>British Columbia</b>		
Peejay	287	407
Others	351	242
	638	649
	23,187	23,691

### Industrial Gas System

The average daily throughput of the system in the Edmonton, Alberta, area was 60 MMcf per day in 1978, decreased from 65 MMcf for the previous year due to natural decline in field productivity. Approximately 46% of the gas is produced from the Company's wells, the balance is purchased.

### Liquefied Petroleum Gas

Sales of LP gas totalled 78 million Imperial gallons, a decrease of 33 million gallons from the previous year, due to lower sales

### Natural gas production

(MMcf per day before royalties)

	1978	1977
<b>Alberta</b>		
Minnehik	19.9	22.8
Westlock	17.7	19.5
Harmattan	11.4	12.3
Crossfield	5.7	6.7
Calgary	5.3	6.4
Fort Saskatchewan	4.8	6.1
Big Bend	5.0	3.3
Nevis	4.9	5.2
Bindloss	3.6	4.8
Bruce	4.4	4.0
Others	64.5	62.0
	147.2	153.1
<b>British Columbia</b>		
Jedney - Bubbles -		
East Laprise	7.4	8.3
Others	1.1	.9
	8.5	9.2
	155.7	162.3

to U.S. wholesale markets. Sales to Canadian customers increased 7% to 50 million gallons, with the largest regional increase occurring in Alberta.

### Coal

Coal production during the year, through the Company's subsidiary, Coleman Collieries Limited, was 1,081,400 clean short tons compared with 929,500 tons in 1977.





*Barry D. Cochrane (centre) Vice-President,  
Corporate Planning in departmental conference*



*Seismic operation in Pembina*



*Diamond drilling — Blizzard property*



# Gas Utilities Division

The gas utilities' contribution to Norcen's income in 1978 was \$14.9 million, a 107% increase from \$7.2 million in 1977.

Gas sales increased to 269 Bcf from 255 Bcf in the previous year as a result of aggressive marketing, and colder weather in the principal operating areas.

The total number of customers served in 1978 was 420,218 compared with 423,342 the previous year.

Revenues for 1978 were \$612 million compared with \$493 million in 1977. This increase of 24% resulted from higher gas volumes and interim rate decisions including recovery of cost of gas increases of 17¢ and 16¢ per Mcf on February 1, and August 1, 1978 respectively.

## Quebec

Sales increased to 89.3 Bcf from 78.1 Bcf, as a result of higher volumes sold to industrial users. In 1978, new sales programs were introduced and additional markets penetrated with considerable success.

The Quebec government has advocated the use of natural gas to supply a larger share of the energy requirements of the province. Applications by two gas transmission companies have been filed with the National Energy Board for expansion of the transmission system within the province. Consequently, Gaz Métropolitain is engaged in detailed marketing and engineering studies to determine the feasibility of installing distribution systems in municipalities located close to the proposed pipeline.

Total number of customers at the end of 1978 was 166,134 compared with 174,665 at the end of the previous year. Average annual sales per customer increased from 447 Mcf to 537 Mcf in 1978.

## Ontario

Sales were 120.7 Bcf compared with 121.7 Bcf in 1977. Additional interruptible sales to large industrial customers compen-



*Utilities customers' account records*



*Reading a utilities customer's meter*



sated for lost sales due to a major strike at one of the Company's largest customers.

A new 16 mile 4" lateral from Timmins to the Texasgulf Kidd Creek Mine was completed during the year and enabled increased volumes of gas to be delivered to this customer commencing in October.

Total number of customers at the end of 1978 was 103,148 compared with 101,689 at the end of the previous year.

#### Manitoba

Sales increased to 51.0 Bcf from 47.5 Bcf due to the addition of 5,109 customers and colder weather conditions. The installation of an additional 35 miles of distribution mains was completed in existing franchised areas where natural gas continues to be the preferred domestic heating fuel for residential and commercial customers.

Total number of customers at the end of 1978 was 141,123 compared with 136,014 at the end of the previous year.

#### Alberta and British Columbia

Sales by the western gas utilities increased 10% to 8.1 Bcf from 7.4 Bcf due to colder weather and greater demand by industrial customers. The total number of customers at the end of 1978 was 9,813 compared with 10,974 at the end of the previous year.

The assets of Beaver River Utilities, Ltd. located in north eastern Alberta and serving 1,600 customers, were sold effective September 30, 1978.

#### Regulation

The regulatory boards in Quebec, Ontario and Manitoba approved without delay interim increases in gas rates to recover higher costs of gas which became effective on February 1 and August 1, 1978.

In addition, the companies in Quebec and Ontario received interim rate increases effective during 1978, providing

annual gross revenues of \$13.2 million, to offset higher cost of service including income taxes and operating and capital costs.

A decision on rate base and allowed rate of return is expected in Ontario early in 1979, and in Quebec by mid-1979.

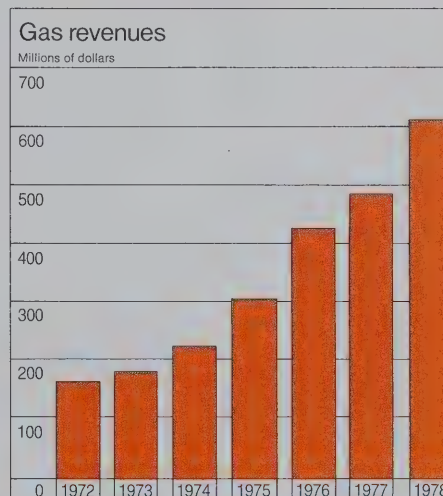
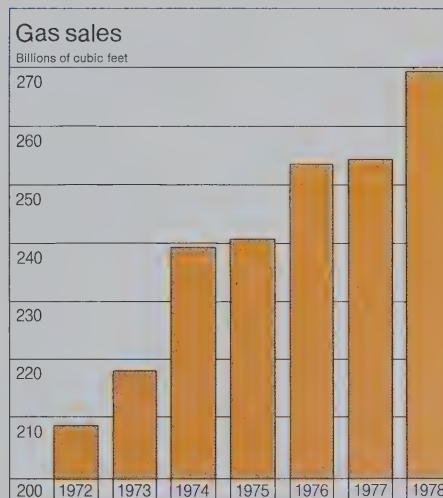
#### Gas Supply

Higher wellhead prices have created greater exploration and development activity in the western provinces and in continued expansion of gas reserves in Canada in 1978. The federal government has deferred a further price increase previously set for February, 1979, to August, 1979, and early 1980. These increases will encourage a continuation of intensive exploration and assist in the development of additional markets.

Total contracted gas supply in 1978 was 883 MMcf per day compared with 873 MMcf per day last year.

#### Capital Expenditures

Capital expenditures in 1978 amounted to \$29.2 million compared with \$26.3 million in 1977. Expenditures in 1979 are set at \$42 million including \$20 million for new business.





# Financial Review

## Sales and other revenues

Sales and other revenues in 1978 were \$775,221,000, an increase of \$128,643,000, or 19.9% over \$646,578,000 in 1977.

In the natural resource sector, oil and gas production and related revenues increased by \$9,030,000 or 5.9% as the result of higher wellhead prices which more than offset the effect of marginally lower production levels.

Sales and other revenues of the gas utilities increased by \$119,613,000 or 24.3% partly due to 5.7% higher volumes, but mainly as the result of the implementation of rate decisions, which allowed recovery in rates not only of greater unit costs of gas but also of higher operating and capital servicing costs.

## Costs and expenses

Gas purchases, primarily cost of gas in the utilities, rose by 22.8% from \$414,875,000 to \$509,494,000 in 1978. While utilities' volumes increased by 5.7%, average unit costs rose by 19.2%, from \$1.51 per Mcf in 1977 to \$1.80 per Mcf in 1978, as the result of price increases including those agreed between the federal and provincial governments.

Production, operation and maintenance expenses increased by 12.7% due to higher levels of activity as well as the continuing impact of inflation on costs of materials, supplies and payroll.

Average short and long-term debt outstanding declined 2.7% in 1978 from a year earlier. Interest and other financial charges increased by \$927,000 or 2.0% due to higher rates of interest and to additional costs of servicing foreign borrowings resulting from the decline in the exchange rate of the Canadian dollar.

## Income and earnings

Income from continuing operations increased 25% to \$43,839,000 in 1978 from \$35,060,000 a year earlier.

After payment of dividends on preference shares of \$1,324,000 in 1978 (\$2,783,000 in 1977), income applicable to common shares rose by 31.7% to \$42,515,000 from \$32,277,000 a year ago. Earnings per

## Sales and other revenues

(thousands of dollars)	1978		1977	
	\$	%	\$	%
Natural resources	163,052	21.0	154,022	23.8
Gas utilities	612,169	79.0	492,556	76.2
	775,221	100.0	646,578	100.0

## Contributions to income

(thousands of dollars)	1978		1977	
	\$	%	\$	%
Natural resources	28,941	66.0	27,866	79.5
Gas utilities	14,898	34.0	7,194	20.5
	43,839	100.0	35,060	100.0

## Net capital expenditures

(thousands of dollars)	1978	1977
<b>Natural resources</b>		
Canada	\$56,191	\$30,477
Foreign	6,175	3,845
	62,366	34,322
<b>Gas utilities</b>		
Quebec	\$15,974	\$14,670
Ontario	7,515	5,870
Manitoba	5,449	5,297
Other	293	436
	29,231	26,273
	\$91,597	\$60,595

share on 22,803,000 common shares (21,255,000 in 1977) increased to \$1.86 from \$1.52 in 1977.

In 1977, decisions were made to discontinue operations of the LaSalle coke plant in Montreal, of a small gas distribution system in Sherbrooke, Quebec and of Coleman Collieries in Alberta, and to write off the costs of participation in the Canadian Arctic Gas Study group. The financial impact of these decisions was reflected fully in the 1977 financial statements as loss on discontinued

operations and extraordinary items. There were no such items in 1978. Including the financial effect of these decisions, net loss applicable to common shares in 1977 was \$2,185,000 (10¢ per share).

## Return on equity

Return on preference and common shareholders' equity was 18.1%, compared with 14.8% in 1977. Return on common shareholders' equity was 19.3% in 1978 compared with 16.7% a year ago.

## Capital expenditures

Expenditures on properties, plant and equipment, after deducting capital contributions from gas utility customers, drilling and seismic incentives as well as capital retirements, were \$91,597,000 in 1978 compared with \$60,595,000 a year earlier. For 1979 such expenditures are estimated at \$123 million, of which \$81 million is expected to be spent by the natural resource sector and \$42 million by the gas utilities.

## Financing

In April and May 1978 Northern and Central Gas Corporation Limited sold by way of private placement in Canada \$20 million 10½% first mortgage bonds, to mature in 1998. Proceeds from the sale were applied to reduce short-term borrowings of the gas utilities.

Financing plans for 1979 include a



common equity issue by Gaz Métropolitain, inc. to provide that company with a more balanced capital structure, and a long-term debt issue for the gas utilities later in the year.

#### Current values and replacement cost data

##### *Oil and gas properties*

Natural resource properties and production equipment are carried in the accounts at a net book value at December 31, 1978 of \$296,679,000 before income tax effect which reflects the costs of acquisition, exploration and development. The Company believes that in assessing the current economics of the business enterprise, it is appropriate to also consider the value of the presently discovered reserves resulting from these costs. The Company engaged independent oil and gas reservoir evaluators to calculate the present value of estimated future net revenues before income taxes discounted to present value at 10% per annum. In calculating such value, prices and costs in effect at December 31, 1978 were assumed to continue for all future periods and provision was made for estimated future development expenditures that will be required to produce the estimated reserves. Such value was calculated to be \$656,298,000 from proven reserves only. No values were assigned either to probable additional reserves or to unexplored or undeveloped properties. This value should not be viewed as the amount which might be realized in a sale of the reserves in-place, nor as the amount which will be ultimately realized from production from the properties.

##### *Gas utility and other facilities*

Due to the impact of inflation, the replacement of existing properties, plant and equipment with equivalent productive capacity would require substantially greater capital investment than the historic costs as reflected in the financial statements. The higher capital investment would, in turn, give rise to higher depreciation charges to amortize such replacement costs.

To assist in assessing the impact of inflation certain asset costs and accumulated depreciation thereon are set out

below on both a historic cost and replacement cost basis. Replacement cost of all properties, plant and equipment other than natural resource properties and related production equipment has been based upon the hypothetical assumption that their entire productive capacity was replaced at the end of the fiscal year. Natural resource properties and related production equipment are not stated on a replacement cost basis.

Replacement cost was generally determined by the use of price indices which are widely used and accepted in the particular lines of business. Where appropriate indices were not available engineering estimates and direct pricing were used. Accumulated depreciation on

a replacement cost basis was developed from the historic relationship of such amounts to each asset category.

Permitted rates, revenues and rates of return of the gas utilities are determined by the respective regulatory authorities by reference to historic costs of properties, plant and equipment and not on the basis of replacement cost. The replacement cost of such assets would be expected to be included for regulatory purposes only at such time as productive capacity is in fact replaced. Applying historic cost depreciation rates to replacement cost data, depreciation expense for the year would have increased by \$16,320,000 (\$13,531,000 in 1977).

	1978		1977	
	Historic cost	Replacement cost	Historic cost	Replacement cost
<i>(thousands of dollars)</i>				
Natural resources				
Pipelines and processing plants	\$ 30,650	\$ 87,076	\$ 30,403	\$ 80,738
Propane marketing equipment	15,993	27,971	16,386	27,276
	46,643	115,047	46,789	108,014
Accumulated depreciation thereon	30,844	80,033	29,733	72,595
	15,799	35,014	17,056	35,419
Gas utilities				
Gas storage	30,759	60,226	30,793	55,527
Gas distribution	448,714	1,026,473	427,474	931,467
Rental equipment	38,976	51,200	40,120	54,112
General and other plant	22,110	40,303	21,575	34,314
	540,559	1,178,202	519,962	1,075,420
Accumulated depreciation thereon	96,932	179,367	90,639	157,285
	443,627	998,835	429,323	918,135
Net value	\$459,426	\$1,033,849	\$446,379	\$ 953,554



# Financial Statements

## Accounting Policies

Years ended December 31, 1978 and 1977

The principal accounting policies followed by Norcen and its subsidiaries are summarized here to facilitate a review of the consolidated financial statements contained in this report.

### Principles of consolidation

The consolidated financial statements include the accounts of Norcen and all of its subsidiaries except Coleman Collieries Limited, an 80% owned subsidiary which has been accounted for on the basis set out in Note 9 (a) to the consolidated financial statements. All inter-company transactions have been eliminated. Norcen's principal operations are oil and gas exploration, development and production. The consolidated subsidiaries' operations are organized into two types of business which, together with the principal companies involved, percentage of voting securities owned, and jurisdiction of incorporation, are as follows:

	Per- centage owner- ship	Juris- diction of incor- poration
--	-----------------------------------	--

#### Natural resources

Prairie Oil Royalties Company, Ltd.	74	Sask.
Norcen Pipelines Ltd.	99	Man.
Cigas Products Ltd.	100	Alta.

#### Gas utilities

Northern and Central Gas Corporation Limited	100	Ont.
Gaz Métropolitain, inc.	82	Que.
Greater Winnipeg Gas Company	99	Man.
Columbia Natural Gas Limited	99	B.C.

On October 1, 1978 Great Plains Development Company of Canada Ltd., a wholly-owned subsidiary, was wound up into the parent company.



*Paul H. Palmer (right) Vice-President, Comptroller, directs accounting staff*

The excess of acquisition costs over underlying value of net assets at date of purchase in respect of natural resource subsidiaries has been included in property costs and is being systematically charged to income in a manner similar to the particular property costs.

The excess costs in respect of gas utility subsidiaries are shown as "Intangible assets arising from acquisitions". In the Company's opinion no diminution in value of this item has occurred and accordingly, these assets are not being amortized.

#### Foreign currency translation

Amounts in foreign currency have been translated to Canadian dollars on the following bases: current assets and current liabilities, at the rate of exchange as at the balance sheet date; properties, plant and equipment and related depreciation and depletion, at the rate of exchange at the date of acquisition; long-term debt, at the rate of exchange at the date the obligation was incurred; sales and other revenues and costs and expenses, at the average rate of exchange for the respective year.



### **Inventories**

Gas in storage is carried at cost which includes transportation and storage. Materials and supplies are carried at the lower of cost, replacement cost, and net realizable value. During the year, Gaz Métropolitain, inc. changed its method of valuing gas in storage to include costs of liquefaction, the effect of which is immaterial.

### **Properties, plant and equipment**

#### *Natural resources*

Oil and gas properties include all expenditures related to the exploration and development of oil and gas reserves, whether or not potentially productive, together with the excess of acquisition cost over underlying value of net assets at date of purchase. These costs are depleted on the composite unit-of-production method, based on total estimated recoverable reserves.

Oil and gas production equipment and related facilities are depreciated over their estimated useful service life on the straight-line method at various rates, the application of which is equivalent to a composite rate of approximately 5.32% (5.67% in 1977).

#### *Gas utilities*

Properties, plant and equipment are carried at cost which includes direct costs, overhead attributable to construction and interest on funds used during construction.

Depreciation is provided on the straight-line method at rates approved by regulatory authorities. The application of such rates is equivalent to a composite rate of approximately 2.88% (2.75% in 1977).

### **Deferred charges**

Costs of issuing long-term debt are deferred in the year incurred and amortized against income over the term of the applicable issue.

Gas utility companies defer, in the year incurred, certain expenses which the regulatory authorities require or permit to be recovered from future revenues; such charges are being amortized over various time periods, not in excess of 20 years.

### **Regulation**

Gas utility rates and revenues are established following public hearings before the respective provincial and federal regulatory authorities. From time to time the authorities grant the companies provisional rate increases which may be subject to refund to customers depending upon the decision of the authorities following a full public hearing. The Company believes that no refunds will be required.

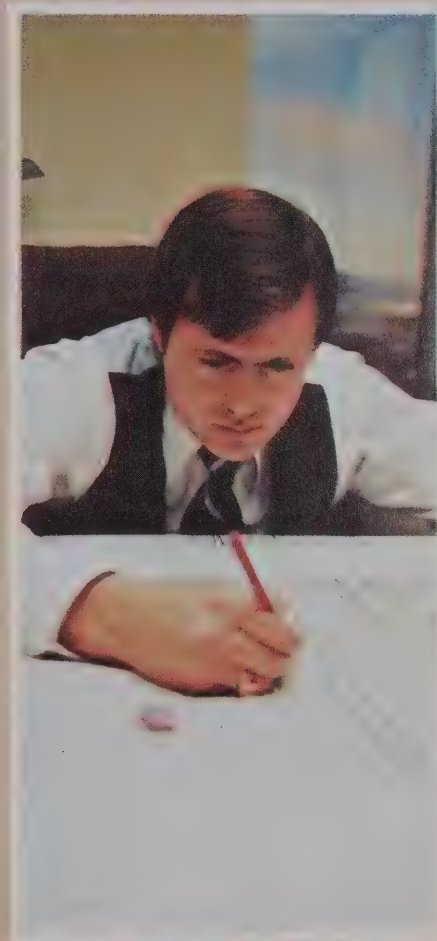
### **Income taxes**

#### *Natural resources*

The companies follow the tax allocation method of accounting whereby provisions for income tax are based on the income reported in the accounts. This method results in the provision of deferred income taxes to the extent that taxes currently payable have been reduced by claiming depletion and depreciation for income tax purposes in amounts differing from those reported in the accounts.

#### *Gas utilities*

The companies' rates and revenues, established for regulatory purposes, include recovery of only such income taxes as are currently payable. Accordingly, the companies provide for income taxes on this basis and do not provide for income taxes which may be payable in future years as a result of current differences in timing of deductions, principally in respect of depreciation and amortization, for financial reporting and income tax purposes. Such income taxes not provided and not recovered in revenues, before applicable minority interests, amounted to \$7,000,000 in 1978, \$4,900,000 in 1977 and \$83,800,000 in total to December 31, 1978.



*Ian Baker, Geophysicist, interprets seismic results.*

### **Earnings per common share**

Earnings per common share have been calculated using the weighted monthly average number of common shares outstanding during the year (22,803,000 in 1978; 21,255,000 in 1977). Fully diluted earnings per common share assumes the conversion of preference shares and convertible notes and the exercise of share options.



# Consolidated Balance Sheet

As at December 31, 1978 and 1977

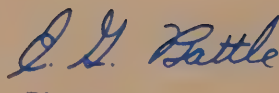
(thousands of dollars)

## Assets

		1978	1977
<b>Current assets</b>	Cash and deposits	\$ 5,571	\$ 11,011
	Accounts receivable and unbilled gas	110,516	92,618
	Inventory of gas in storage and supplies	28,811	25,346
	Prepayments, advances and deposits	4,352	4,378
	Total current assets	149,250	133,353
<b>Investments, at cost less amounts written off (Note 2)</b>		9,583	10,534
<b>Properties, plant and equipment (Note 3)</b>		756,105	702,476
<b>Deferred charges (Note 4)</b>		30,858	32,227
<b>Intangible assets arising from acquisitions, at cost</b>		35,820	35,820

Approved by the Board

  
Director

  
Director

\$981,616 \$914,410



## Liabilities

		1978	1977
<b>Current liabilities</b>	Accounts payable	\$ 98,191	\$ 80,256
	Accrued interest	8,973	9,706
	Income and other taxes	5,394	4,191
	Current maturities on long-term debt	22,511	25,282
	Current liabilities, excluding demand bank credits	135,069	119,435
	Demand bank credits (Note 5)	63,619	36,971
	Total current liabilities	198,688	156,406
<b>Long-term debt (Note 6)</b>		397,280	408,778
<b>Provision for future costs on discontinued operations (Note 7)</b>		9,405	9,712
	Total liabilities	605,373	574,896
<b>Deferred income taxes</b>		52,272	42,514
<b>Minority interests in subsidiaries</b>		68,892	68,043

## Shareholders' Equity

### Capital stock (Note 8)

	Issued				
	2,783	First preference shares \$1.06 cumulative, series A (3,108 in 1977)	70	78	
	200,977	\$1.50 cumulative, series B (228,261 in 1977)	5,024	5,706	
	631,158	Junior preference shares \$1.50 cumulative convertible, first series (684,933 in 1977)	15,779	17,123	
	22,902,981	Common shares (22,726,283 in 1977)	140,271	137,672	
<b>Retained earnings</b>			93,935	68,378	
	Total shareholders' equity		255,079	228,957	
			\$981,616	\$914,410	



# Consolidated Statement of Income

Years ended December 31, 1978 and 1977

(thousands of dollars)

		1978	1977
<b>Sales and other revenues</b>	Natural resources	\$163,052	\$154,022
	Gas utilities	612,169	492,556
		<b>775,221</b>	<b>646,578</b>
<b>Costs and expenses</b>	Gas purchases	509,494	414,875
	Production, operations and maintenance	101,237	89,850
	Depreciation and depletion	37,430	34,507
	Interest on long-term debt	41,788	42,039
	Other financial expense	4,704	3,526
	Income taxes — current	21,300	20,744
	— deferred	9,758	4,116
	Minority interests in subsidiaries	5,671	1,861
		<b>731,382</b>	<b>611,518</b>
<b>Income from continuing operations</b>		<b>43,839</b>	<b>35,060</b>
<b>Share of loss of discontinued operations before extraordinary items</b> (Note 9)			2,057
<b>Income before extraordinary items</b>		<b>43,839</b>	<b>33,003</b>
<b>Extraordinary items</b> (Note 10)			( 32,405)
<b>Consolidated net income</b>		<b>\$ 43,839</b>	<b>\$ 598</b>
<b>Dividends on preference shares</b>		<b>\$ 1,324</b>	<b>\$ 2,783</b>
<b>Net income (loss) applicable to common shares</b>		<b>\$ 42,515</b>	<b>\$ ( 2,185)</b>
<b>Income applicable to common shares from continuing operations before extraordinary items</b>		<b>\$ 42,515</b>	<b>\$ 32,277</b>
<b>Earnings per common share</b> (Note 11)			
	Basic	<b>\$ 1.86</b>	<b>\$ 1.52</b>
	Fully diluted	<b>\$ 1.82</b>	<b>\$ 1.46</b>



# Consolidated Statement of Retained Earnings

Years ended December 31, 1978 and 1977

(thousands of dollars)

	1978	1977
<b>Balance at beginning of year</b>	<b>\$ 68,378</b>	<b>\$ 87,131</b>
Consolidated net income	43,839	598
	112,217	87,729
Dividends		
Preference shares – Series A	3	4
– Series B	333	1,203
– Junior	988	1,576
Common shares	16,414	15,084
Preference share issue expense of a subsidiary company		1,286
Other	544	198
	18,282	19,351
<b>Balance at end of year</b>	<b>\$ 93,935</b>	<b>\$ 68,378</b>

## Auditors' Report

To the Shareholders,  
Norcen Energy Resources Limited

We have examined the consolidated balance sheet of Norcen Energy Resources Limited as at December 31, 1978 and 1977 and the consolidated statements of income, retained earnings and changes in financial position for the years then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the company as at December 31, 1978 and 1977 and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles applied on a consistent basis.

Toronto, Canada  
February 2, 1979

**THORNE RIDDELL & CO.**  
Chartered Accountants



# Consolidated Statement of Changes in Financial Position

Years ended December 31, 1978 and 1977

(thousands of dollars)

		1978	1977
<b>Source of funds</b>	From continuing operations		
	– natural resources	\$ 62,603	\$ 53,284
	– gas utilities	37,921	25,018
		100,524	78,302
	From discontinued operations		786
	Increase in demand bank credits, net	26,648	
	Issue of long-term debt	20,000	
	Issue of preference shares by a subsidiary company		33,714
	Investments	728	523
	Issue of common shares	573	174
		148,473	113,499
<b>Application of funds</b>	Expenditures on properties, plant and equipment, net		
	– natural resources	62,366	34,322
	– gas utilities	29,231	26,273
		91,597	60,595
	Reduction in demand bank credits, net		12,659
	Retirement of long-term debt	30,816	28,387
	Dividends – common shares	16,414	15,084
	– preference shares	1,324	2,783
	– minority shareholders of subsidiaries	4,601	1,662
	Redemption of preference shares	690	435
	Shut-down of LaSalle coke plant	307	5,572
	Abandonment of gas distribution facilities		1,132
	Deferred charges	1,696	1,909
	Other, net	765	
		148,210	130,218
<b>Increase (decrease) in funds</b>		263	(16,719)
<b>Funds at beginning of year</b>		13,918	30,637
<b>Funds at end of year</b>		\$ 14,181	\$ 13,918
<b>Summary of funds</b>	Current assets	\$149,250	\$133,353
	Current liabilities, excluding demand bank credits (Note 5)	135,069	119,435
	Funds at end of year	\$ 14,181	\$ 13,918



# Notes to Consolidated Financial Statements

Years ended December 31, 1978 and 1977

(Tabular amounts are in thousands of dollars)

## 1. Accounting policies

The information on pages 14 and 15 presents a summary of the principal accounting policies and is an integral part of these financial statements.

## 2. Investments

	1978	1977
This item comprises:		
Investment in Coleman Collieries Limited (Note 9 (a))		
— debentures	\$ 1,778	\$ 3,250
Land held for resale, at estimated realizable value	2,303	1,802
Other investments, at cost		
Panarctic Oils Ltd.	2,002	1,815
Mortgages receivable	2,261	2,823
Other	1,239	844
	5,502	5,482
	\$ 9,583	\$10,534

## 3. Properties, plant and equipment

	1978		1977	
	Cost	Accumulated depreciation and depletion	Net	Net
Natural resources				
Properties	\$ 356,753	\$100,721	\$256,032	\$220,900
Production equipment	69,209	28,562	40,647	35,197
Pipelines and processing plants	30,650	23,966	6,684	7,203
Propane marketing equipment	15,993	6,878	9,115	9,853
	472,605	160,127	312,478	273,153
Gas utilities				
Gas storage	30,759	5,068	25,691	26,204
Gas distribution	448,714	66,762	381,952	365,705
Rental equipment	38,976	17,567	21,409	23,304
General and other plant	22,110	7,535	14,575	14,110
	540,559	96,932	443,627	429,323
	\$1,013,164	\$257,059	\$756,105	\$702,476



**4. Deferred charges**

	<i>Basis or period of amortization</i>	<i>Net book value December 31, 1978      1977</i>	
Natural resources			
Long-term debt issue expense	(a)	\$ 2,289	\$ 2,576
Gas utilities			
Long-term debt issue expense	(a)	5,949	6,290
Special gas costs	5 – 20 years	3,414	4,544
LaSalle coke plant (Note 9(b))			
– cost of plant	(b)	6,490	6,300
– deferred income taxes	(c)	8,572	8,572
Other		4,144	3,945
		28,569	29,651
		\$30,858	\$32,227

(a) amortized over term of applicable issue

(b) to be amortized over 5 years commencing in 1979 as approved by regulatory authority

(c) to be recovered out of future revenues, as approved by regulatory authority

**5. Demand bank credits**

The Company and its consolidated subsidiaries have the following obligations under established bank lines of credit of \$106,750,000 at December 31, 1978:

	<i>Average % rate of interest at December 31, 1978</i>	<i>1978</i>	<i>1977</i>
Commercial paper	10.2	\$34,925	\$19,700
Bankers' acceptances	10.5	20,000	
Income debentures			2,000
Bank loans – unsecured	11.6	8,694	15,271
		\$63,619	\$36,971

While demand bank credits are by their terms due within one year and therefore classified as current liabilities, the companies have in the past retired, and anticipate in the future retiring, such obligations through the issue of long-term capital.



## 6. Long-term debt

	<i>Due within one year</i>	<i>1978</i>	<i>1977</i>
<b>Natural resources</b>			
5% % – first mortgage bonds, 1980	\$ 1,466	\$ 2,128	\$ 3,315
9¾ % – 11¼ % secured debentures, 1983 – 1996		55,000	55,000
10¼ % – 11¼ % secured notes, 1988	7,081	67,224	72,924
Notes and purchase agreements	131	2,638	2,717
Convertible notes	1,153	1,153	1,839
	<u>9,831</u>	<u>128,143</u>	<u>135,795</u>
<b>Gas utilities</b>			
5½ % – 11% % first mortgage bonds, 1978 – 1998	9,597	188,320	184,783
6% general mortgage bonds, 1988 – 1989	375	8,760	9,129
9% % senior debentures, 1991		40,598	46,000
6% subordinated notes, 1987	464	3,709	4,088
5½ % – 11¼ % debentures, 1979 – 1991	2,597	50,614	54,595
	<u>13,033</u>	<u>292,001</u>	<u>298,595</u>
	<u>\$ 22,864</u>	<u>420,144</u>	<u>434,390</u>
<b>Deduct</b>			
Long-term debt held for sinking fund purposes		353	330
Current maturities on long-term debt		22,511	25,282
		<u>22,864</u>	<u>25,612</u>
		<u>\$397,280</u>	<u>\$408,778</u>

Securities issued in U.S. funds are included above at their Canadian dollar equivalent (\$125,854,000 in 1978 and \$138,907,000 in 1977) at respective dates of issue except for current maturities which are translated at year-end rates. Translation of such issues at rates of exchange prevailing at year-end would result in an increase in long-term debt of \$22,420,000 at December 31, 1978 (\$10,666,000 at December 31, 1977).

Effective January 1, 1979 the Canadian Institute of Chartered Accountants has recommended that such amounts be recorded as deferred items and be amortized to income over the remaining life of the

related issues which on average is ten years. It is the intention of the Company to adopt the recommendation prospectively.

Convertible notes are payable to officers and employees, bear interest at bank prime lending rate plus ½ of 1% and are convertible into common shares from time to time to July 31, 1979 at a price of \$12.32 per share.

Long-term debt maturities and sinking fund requirements for each of the four years subsequent to 1979 are as follows:

1980	\$23,917,000	1982	\$35,909,000
1981	\$25,838,000	1983	\$44,729,000

## 7. Provision for future costs on discontinued operations

	<i>1978</i>	<i>1977</i>
<b>This item comprises:</b>		
Estimated loss resulting from guarantee of Coleman Collieries Limited bank indebtedness (Note 9(a))	\$8,048	\$8,048
LaSalle coke plant closing costs excluding \$403,000 (\$595,000 in 1977) included in current liabilities	1,357	1,664
	<u>\$9,405</u>	<u>\$9,712</u>



## 8. Capital stock

Authorized capital stock of the Company at December 31, 1978 consisted of 1,300,000 first preference shares without par value issuable in series; 4,000,000 junior preference shares without par value issuable in series; and unlimited common shares without par value.

### *Preference shares*

First preference shares, series A and series B (redeemable at the Company's option at \$27.50 and \$26.50 per share respectively) have voting rights. Junior preference shares (redeemable at the Company's option at \$26.25 per share) have voting rights and are convertible into 986,184 common shares to June 30, 1982.

During the year the Company purchased for redemption 325 first preference shares series A and 27,284 series B and 53,775 junior preference shares were converted to common shares.

### *Common shares*

During the year common shares were issued as follows:

	1978	1977
Conversion of junior preference shares	84,024	1,307,464
Conversion of first preference shares (privilege terminated August 15, 1977)		1,579,043
Exercise of warrants		175,501
Conversion of convertible notes	55,155	4,879
Exercise of incentive stock options	1,936	1,986
Employee savings and investment plan	35,583	11,692
	176,698	3,080,565
Unissued common shares are reserved as follows:		
Conversion of junior preference shares	986,184	1,070,207
Exercise of warrants at \$15.00 per common share (expired in 1978)		1,981
Incentive stock option plan, of which market growth options on 144,800 shares were outstanding at December 31, 1978, and 150,000 shares at December 31, 1977, exercisable at a price of \$11.375 expiring in 1982	646,888	648,824
Conversion of convertible notes (Note 6)	93,521	149,161
Employee savings and investment plan	152,725	188,308
	1,879,318	2,058,481

## 9. Discontinued operations

(a) As at September 30, 1977, Coleman Collieries Limited made the decision to continue its operations to the end of its present long-term sales contracts on March 31, 1980 and to cease operations on that date. All costs anticipated to be incurred by Coleman and the Company on the discontinuance of Coleman's operations together with mining development costs incurred but not expected to be recovered from operations between October 1, 1977 and March 31, 1980, were shown as an extraordinary item in the 1977 consolidated statement of income. The effect of recording this extraordinary item was to write-off the equity investment in Coleman and to provide \$8,048,000 as the Company's estimated loss as a result of guaranteeing the bank indebtedness of Coleman to a maximum of \$20,000,000.

The projected results of operations of Coleman for the period October 1, 1977 to March 31, 1980 were considered in arriving at the amount of the extraordinary item. No further adjustment will be made in the accounts of the Company until March 31, 1980, unless economic circumstances dictate the requirement for an adjustment before that date.

The assets and liabilities of Coleman have not been included in the consolidated balance sheet of the Company as at December 31, 1978 and 1977. The Company's share of Coleman's loss for the nine months ended September 30, 1977 in the amount of \$2,454,000 was included in share of loss of discontinued operations in the consolidated statement of income. Coleman's operating results since September 30, 1977 have not been included in the accounts of the Company for the reasons stated above.

A condensed balance sheet of Coleman as at December 31, 1978 and 1977 is as follows:

	1978	1977
Current assets	\$ 9,822	\$ 5,473
Mining assets	16,562	18,387
Other assets	2,464	2,619
	\$28,848	\$26,479
Bank loans	\$13,820	\$13,320
Other current liabilities	13,300	9,903
Other liabilities	9,844	11,660
	36,964	34,883
Shareholders' equity (deficit)	(8,116)	(8,404)
	\$28,848	\$26,479

Summarized operating results for Coleman before minority interests are as follows:

	Year ended December 31	
	1978	1977
Gross revenues	\$56,852	\$46,801
Costs and expenses	56,565	50,665
Income (loss) before extraordinary items	\$ 287	\$(3,864)

(b) In May 1977, Gaz Métropolitain, inc. discontinued operations at its LaSalle coke plant. The book value of the plant at date of discontinuance, together with estimated net costs incidental to discontinuance, less estimated realizable value of the land, have been reflected as deferred charges to the extent that the regulatory authority has approved recovery in future cost of service of the gas utility. The balance of such costs less deferred income taxes of \$8,572,000 was charged to income in 1977 as an extraordinary item. The Company's share of earnings of the coke operations for the six months ended June 30, 1977 of \$397,000 was included in share of loss of discontinued operations in the consolidated statement of income.

## 10. Extraordinary items

1977

This item comprises:

Write-down of investment in Coleman Collieries Limited and provision for future costs on discontinuance (Note 9 (a))	\$18,200
Write-down of the LaSalle coke plant and provision for costs of shutdown less deferred income taxes of \$8,572,000 (Note 9(b))	8,097
Write-off of investment in Canadian Arctic Gas Study Limited less income taxes of \$3,760,000	4,240
Abandonment of gas distribution facilities	1,868
	\$32,405

The above amounts are net of minority interests. There were no such items in 1978.

## 11. Earnings per common share

	1978		1977	
	Basic	Fully diluted	Basic	Fully diluted
From continuing operations	\$1.86	\$1.82	\$1.52	\$1.46
Before extraordinary items	\$1.86	\$1.82	\$1.42	\$1.37
Net income (loss)	\$1.86	\$1.82	\$(.10)	\$(.10)



## 12. Saskatchewan royalties and taxes

In 1973 the Government of the Province of Saskatchewan introduced legislation, effective January 1, 1974, providing for the payment of mineral income taxes and a royalty surcharge on all oil produced from wells in the province. The Company challenged the constitutionality of the legislation in the courts. A decision of the Supreme Court of Canada on November 23, 1977 confirmed the Company's position and held that the Company was entitled to recover monies paid by way of mineral income tax and royalty surcharge with interest thereon. In February 1979, the Company received \$3,673,000 including \$670,000 of interest and court costs in satisfaction of the Supreme Court decision. Such recovery has not been reflected in the accounts pending completion of the negotiations referred to below.

Subsequent to the Supreme Court decision the province enacted The Oil Well Income Tax Act, 1978 (the "Act") which was proclaimed on September 1, 1978. The tax imposed by this Act, which is retroactive to January 1, 1974, could exceed the aggregate of the said mineral income tax and royalty surcharge by \$8,500,000 during the retroactive period ending August 31, 1978. Liabilities, if any, under this Act in the retroactive period are currently under negotiation with the province. Full provision has been made in the accounts only for amounts payable under this Act from September 1, 1978.

## 13. Other information

Unfunded liabilities for past service pension benefits amounted to approximately \$3,779,000 at December 31, 1978 and are being funded and expensed over a maximum period of 15 years.

Remuneration of directors and senior officers of the Company was \$1,242,000 in 1978 and \$1,131,000 in 1977.

## 14. Quarterly financial data (unaudited)

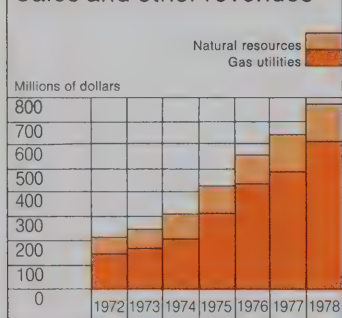
1978	Quarter				
	First	Second	Third	Fourth	Year
Net revenues	\$244,294	\$164,152	\$134,139	\$232,636	\$775,221
Net income (loss) before income taxes	\$ 38,238	\$ 13,654	\$ ( 3,063)	\$ 24,744	\$ 73,573
Net income (loss)	\$ 23,208	\$ 6,401	\$ ( 4,235)	\$ 17,141	\$ 42,515
Net income (loss) per share	\$ 1.02	\$ .28	\$ (.19)	\$ .75	\$ 1.86
1977					
Net revenues	\$202,943	\$132,227	\$115,241	\$196,167	\$646,578
Net income (loss) before income taxes*	\$ 31,007	\$ 7,932	\$ ( 1,197)	\$ 19,395	\$ 57,137
Net income (loss)*	\$ 20,593	\$ 2,688	\$ ( 3,868)	\$ 12,864	\$ 32,277
Net income (loss)* per share	\$ 1.05	\$ .13	\$ (.19)	\$ .61	\$ 1.52

\*From continuing operations before extraordinary items

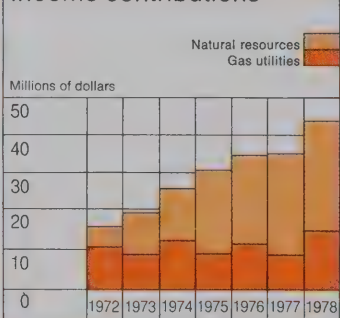
The sum of quarterly earnings per share for 1977 does not equal earnings per share for the year due

to the effect on average outstanding shares of the conversion of preference shares.

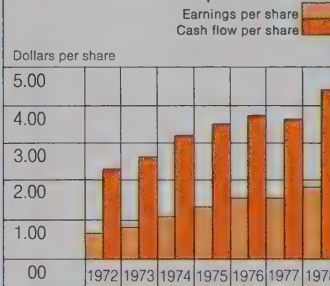
### Sales and other revenues



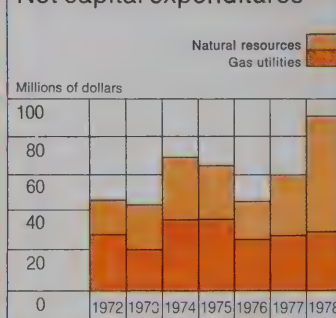
### Income contributions



### Per share earnings and cash flow from operations



### Net capital expenditures





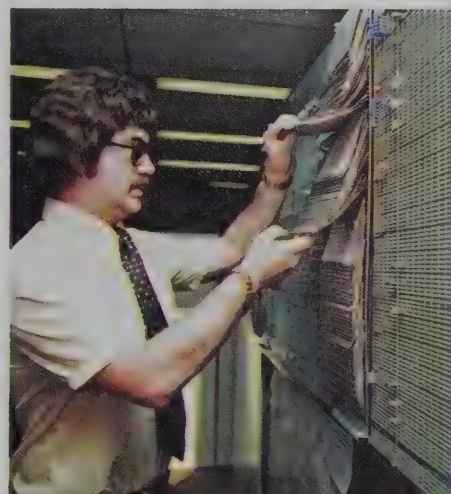
Arthur E. Slingsby, minerals project geologist, examines rock sections



Laurence A. Sills (left) Assistant Secretary, discusses insurance with brokers' representatives.



Alison L. Ross of the drafting department, plots company acreage



Kenneth E. Price, traffic coordinator, keeps track of LPG tank cars



# Earnings Analysis 1977-78

## Natural Resources (thousands of dollars)

	<i>Total</i>		<i>Oil and gas production</i>		<i>Oil gathering and transmission</i>	
	1978	1977	1978	1977	1978	1977
Sales and other revenues	\$163,052	\$154,022	\$118,612	\$104,094	\$ 4,372	\$ 4,838
Cost of gas	23,939	29,536				
Operating expenses	31,909	26,916	21,477	17,389	1,387	1,201
Depreciation and depletion	23,013	20,901	21,341	19,136	365	354
	78,861	77,353	42,818	36,525	1,752	1,555
Operating income	84,191	76,669	\$ 75,794	\$ 67,569	\$ 2,620	\$ 3,283
Administrative expenses	11,200	9,596				
Interest <sup>1</sup>	18,346	16,654				
Income taxes <sup>2</sup>	25,124	22,053				
Minority interests	580	500				
	55,250	48,803				
Contribution to income	\$ 28,941	\$ 27,866				

## Gas Utilities (thousands of dollars)

	<i>Total</i>		<i>Ontario</i>	
	1978	1977	1978	1977
Gas sales	\$601,797	\$482,449	\$250,046	\$207,630
Other revenues	10,372	10,107	4,122	4,206
	612,169	492,556	254,168	211,836
Cost of gas	485,555	385,339	217,321	179,479
Operating and administrative expenses	58,128	53,338	15,446	14,746
Depreciation	14,417	13,606	4,389	4,313
Income taxes <sup>2</sup>	5,934	2,807	1,799	56
	564,034	455,090	238,955	198,594
Operating income	48,135	37,466	15,213	13,242
Interest <sup>1</sup>	28,146	28,911	8,820	10,157
Minority interests	5,091	1,361	2,052	383
Contribution to income	\$ 14,898	\$ 7,194	\$ 4,341	\$ 2,702
Properties, plant and equipment, net, at year end	\$443,627	\$429,323	\$147,608	\$144,731
Operating income as a percentage of properties, plant and equipment at year end	10.9%	8.7%	10.3%	9.1%
Gas sales volumes (MMcf)	269,081	254,688	120,685	121,673
Degree day deficiencies – actual			5,817	5,284
– normal			5,459	5,458

Industrial gas system		Liquefied petroleum gas		Other	
1978	1977	1978	1977	1978	1977
\$ 7,276	\$ 7,108	\$ 31,908	\$ 37,252	\$ 884	\$ 730
3,569	3,815	20,370	25,721		
1,266	949	7,779	7,377		
401	380	906	1,031		
5,236	5,144	29,055	34,129		
\$ 2,040	\$ 1,964	\$ 2,853	\$ 3,123	\$ 884	\$ 730

#### Oil and gas production revenues

	1978	1977
Crude oil	\$ 60,727	\$ 51,134
Natural gas liquids	7,319	7,394
Natural gas	50,263	45,287
Sulphur	303	279
	\$118,612	\$104,094

Quebec		Manitoba		Other	
1978	1977	1978	1977	1978	1977
\$227,039	\$176,784	\$110,250	\$ 86,767	\$ 14,462	\$ 11,268
4,020	3,634	2,165	2,267	65	
231,059	180,418	112,415	89,034	14,527	11,268
173,027	133,014	83,496	63,951	11,711	8,895
27,771	24,973	13,607	12,425	1,304	1,194
6,895	6,225	2,899	2,833	234	235
		3,788	2,472	347	279
207,693	164,212	103,790	81,681	13,596	10,603
23,366	16,206	8,625	7,353	931	665
14,728	14,451	4,244	3,972	354	331
3,028	969	11	9		
\$ 5,610	\$ 786	\$ 4,370	\$ 3,372	\$ 577	\$ 334
\$210,517	\$201,602	\$ 77,203	\$ 74,745	\$ 8,299	\$ 8,245
11.1%	8.0%	11.2%	9.8%	11.2%	8.1%
89,265	78,097	51,022	47,517	8,109	7,401
4,930	4,531	6,170	5,540	4,858	4,738
4,470	4,470	5,960	5,960	4,500	4,500

#### NOTES:

<sup>1</sup> Interest payable by Norcen to Northern and Central Gas is not included in this earnings analysis. Interest expense shown for "Gas utilities – Ontario" includes interest on all debt obligations of Northern and Central Gas after deducting interest income received on debt obligations of gas distribution subsidiaries in Quebec and Manitoba.

#### <sup>2</sup> Income taxes

A reconciliation between statutory and effective income taxes follows.

	1978	1977
<b>Natural resources</b>		
Tax based on combined federal-provincial statutory income tax rate	\$25,119	\$21,282
Federal resource allowance	(15,517)	(13,521)
Depletion allowance on Canadian oil and gas income	( 6,575)	( 4,493)
Provincial royalties and deemed income on oil and gas production less provincial tax credits and refunds	18,677	15,310
Excess of provincial income taxes over federal abatement	316	991
Non-deductible acquisition costs	1,320	1,342
Timing differences on inter-corporate transactions	791	
Other items – net	993	1,142
Effective income taxes	\$25,124	\$22,053
<b>Gas utilities</b>		
Tax based on combined federal-provincial statutory income tax rate	\$11,924	\$ 6,921
Excess of tax over book depreciation	( 3,393)	( 1,025)
Application of prior years' losses	( 3,619)	
Tax-exempt income	( 561)	( 679)
Non-deductible items	226	498
Excess of provincial income taxes over federal abatement	544	260
Deferred charges and other items claimed for tax purposes in year incurred	706	( 841)
Tax effect of losses arising on shut-down of coke operations		( 2,533)
Other	107	206
Effective income taxes	\$ 5,934	\$ 2,807



# Financial Summary 1972-78

(thousands of dollars, except per share figures)

	1978	1977	1976	1975	1974	1973	1972
<b>Revenues</b>							
Natural resources	\$163,052	\$154,022	\$134,265	\$120,590	\$ 80,876	\$ 58,964	\$ 47,432
Gas utilities	612,169	492,556	425,080	302,072	220,358	174,935	160,831
	775,221	646,578	559,345	422,662	301,234	233,899	208,263
<b>Costs and expenses</b>							
Gas purchases, production and operations	610,731	504,725	430,687	302,745	210,213	159,354	141,766
Depreciation and depletion	37,430	34,507	32,164	30,125	22,040	20,420	18,334
Interest	46,492	45,565	43,860	38,099	27,822	25,351	23,664
Income taxes	31,058	24,860	14,642	18,245	12,651	6,869	5,776
Minority interests	5,671	1,861	3,069	2,515	2,863	2,235	2,025
	731,382	611,518	524,422	391,729	275,589	214,229	191,565
<b>Income from continuing operations</b>							
Natural resources	28,941	27,866	24,189	21,512	13,067	10,226	6,541
Gas utilities	14,898	7,194	10,734	9,421	12,578	9,444	10,157
	43,839	35,060	34,923	30,933	25,645	19,670	16,698
<b>Share of earnings (loss) of discontinued operations</b>		( 2,057)	1,873	2,046	2,973	403	202
<b>Income before extraordinary items</b>	43,839	33,003	36,796	32,979	28,618	20,073	16,900
<b>Extraordinary items</b>		(32,405)	3,081	( 6,046)	( 1,283)		
<b>Consolidated net income</b>	\$ 43,839	\$ 598	\$ 39,877	\$ 26,933	\$ 27,335	\$ 20,073	\$ 16,900
<b>Dividends on preference shares</b>	\$ 1,324	\$ 2,783	\$ 3,969	\$ 4,108	\$ 4,161	\$ 4,207	\$ 3,160
<b>Weighted average number of common shares (000's)</b>	22,803	21,255	19,554	19,397	19,391	19,276	19,060
<b>Income applicable to common shares from continuing operations before extraordinary items</b>	\$ 42,515	\$ 32,277	\$ 30,954	\$ 26,825	\$ 21,484	\$ 15,463	\$ 13,538
<b>Per share</b>							
Basic	\$ 1.86	\$ 1.52	\$ 1.58	\$ 1.38	\$ 1.11	\$ 0.80	\$ 0.71
Fully diluted	\$ 1.82	\$ 1.46	\$ 1.43	\$ 1.28	\$ 1.05	\$ 0.80	\$ 0.71
<b>Income (loss) applicable to common shares including discontinued operations and extraordinary items</b>	\$ 42,515	\$ ( 2,185)	\$ 35,908	\$ 22,825	\$ 23,174	\$ 15,866	\$ 13,740
<b>Per share</b>							
Basic	\$ 1.86	\$ ( 0.10)	\$ 1.84	\$ 1.18	\$ 1.19	\$ 0.82	\$ 0.72
Fully diluted	\$ 1.82	\$ ( 0.10)	\$ 1.63	\$ 1.10	\$ 1.11	\$ 0.82	\$ 0.72
<b>Net capital expenditures</b>							
Natural resources	\$ 62,366	\$ 34,322	\$ 22,788	\$ 29,554	\$ 33,632	\$ 20,572	\$ 16,083
Gas utilities	29,231	26,273	24,217	35,603	36,145	20,467	29,281
	\$ 91,597	\$ 60,595	\$ 47,005	\$ 65,157	\$ 69,777	\$ 41,039	\$ 45,364

# Operating Summary 1972-78

		1978	1977	1976	1975	1974	1973	1972
<b>Natural resources</b>								
<b>Production</b>								
Crude oil, synthetic crude oil and gas liquids	bbls/day	23,200	23,700	23,300	25,800	17,100	16,700	11,600
Natural gas	MMcf/day	156	162	166	177	134	128	99
Sulphur	long tons	20,200	21,600	15,100	23,300	19,300	17,800	14,700
Gas gathering and transmission sales	MMcf/day	60	65	76	92	143	146	139
Oil gathering and transmission throughput	bbls/day	73,600	80,500	83,000	81,400	98,500	110,800	113,400
Liquefied petroleum gas sales	imp. gals (000's)	78,500	111,600	123,100	110,400	94,800	95,900	88,400
<b>Reserves</b>								
Oil and gas liquids	bbls (000's)	117,340	109,813	118,161	130,655	81,298	79,159	70,216
Natural gas	MMcf	1,019,902	1,016,213	1,075,365	1,152,830	746,910	773,528	582,200
Sulphur	long tons	567,680	498,008	519,565	543,643	305,700	252,000	227,000
Oil and gas land holdings	gross acres (000's)	36,783	28,541	29,128	31,590	30,038	23,381	20,066
	net acres (000's)	8,925	9,327	10,504	11,873	12,345	11,984	10,966
<b>Gas utilities</b>								
<b>Gas sales</b>		<b>MMcf</b>						
Industrial, firm		109,224	108,486	106,613	104,922	102,644	90,805	84,888
Industrial, interruptible		61,968	56,108	52,001	43,353	45,554	48,171	41,254
Commercial		46,530	41,207	42,148	43,133	42,200	33,847	33,623
Residential		51,359	48,887	52,526	49,619	49,242	45,359	48,499
		269,081	254,688	253,288	241,027	239,640	218,182	208,264
Customers at year-end		420,218	423,342	424,621	422,780	419,280	406,835	403,544
<b>Employees at year-end</b>								
Natural resources		1,193	1,153	1,300	1,100	1,133	1,137	1,087
Gas utilities		1,975	2,100	2,000	2,100	1,980	1,955	1,968
		3,168	3,253	3,300	3,200	3,113	3,092	3,055
<b>Miles of pipelines</b>								
Natural resources		1,112	1,111	1,110	1,109	1,103	1,107	1,100
Gas utilities		5,864	5,833	5,755	5,683	5,218	5,144	5,053
		6,976	6,944	6,865	6,792	6,321	6,251	6,153



# Directors, Officers and Corporate Information

## DIRECTORS

**\*Edward G. Battle**  
Toronto, Ontario  
President of the Company

**\*Edmund C. Bovey, C.M.**  
Toronto, Ontario  
Chairman of the Board

**\*C. Spencer Clark, Ph.D.**  
Seattle, Washington  
Consultant

**\*E. Jacques Courtois, Q.C.**  
Montreal, Quebec  
Partner with Courtois,  
Clarkson, Parsons & Tétrault,  
Barristers & Solicitors

**J. Ian Crookston**  
Toronto, Ontario  
Financial Consultant

**Robert Després, O.C.**  
Quebec City, Quebec  
President and Chief Executive Officer  
National Cablevision Ltd.

**\*Edward A. Galvin**  
Calgary, Alberta  
President, Poco Oil Ltd.

**\*Frederick A. M. Huycke, Q.C.**  
Toronto, Ontario  
Partner with Osler,  
Hoskin & Harcourt  
Barristers & Solicitors

**†Raymond Lavoie**  
Montreal, Quebec  
Vice-Chairman, President and  
Chief Executive Officer,  
Crédit Foncier Franco-Canadien

**A. Searle Leach, O.C.**  
Winnipeg, Manitoba  
Honorary Chairman  
Federal Industries Ltd.

**†Richey B. Love, Q.C.**  
Calgary, Alberta  
Partner with Macleod Dixon  
Barristers & Solicitors

**Linden J. Richards**  
Tucson, Arizona  
Director, Quintana Exploration Co.

**Henry S. Romaine**  
New York, New York  
Executive Vice-President  
The Mutual Life Insurance  
Company of New York

**William I. M. Turner, Jr.**  
Montreal, Quebec  
President and Chief Executive Officer  
Consolidated-Bathurst Inc.

**William O. Twaits, C.C.**  
Toronto, Ontario  
Director of various companies

**John R. Yarnell**  
Toronto, Ontario  
President  
Yarnell Associates Limited

**\*†Adam H. Zimmerman**  
Toronto, Ontario  
Executive Vice-President  
and Director  
Noranda Mines Limited

## OFFICERS

Edmund C. Bovey  
*Chairman of the Board*

Edward G. Battle  
*President*

Donald D. Barkwell  
*Senior Vice-President,  
Natural Resources*

Jean-J. Leroux  
*Senior Vice-President,  
Utilities*

Barry D. Cochrane  
*Vice-President,  
Corporate Planning*  
William C. Hennenfent  
*Vice-President,  
Production*

Peter Kaye  
*Vice-President,  
Exploration*

William T. Kilbourne  
*Vice-President,  
Administration and Secretary*

Wilfrid A. Loucks  
*Vice-President,  
Minerals*

Paul H. Palmer  
*Vice-President,  
Comptroller*

Timothy G. Sheeres  
*Vice-President,  
Finance*

Alick S. G. Duguid  
*Treasurer*

Russell G. Rennie  
*Assistant Secretary*

Laurence A. Sills  
*Assistant Secretary*  
A. Kenneth Davies  
*Assistant Treasurer*

Mart Pedel  
*Assistant Treasurer*

## CORPORATE INFORMATION

### Transfer Agents and Registrars COMMON SHARES

National Trust Company, Limited  
Toronto, Calgary, Montreal,  
Winnipeg & Vancouver

Canada Permanent Trust Company  
Regina

Morgan Guaranty Trust Company of  
New York, New York

### PREFERENCE SHARES (All Classes)

National Trust Company, Limited  
Toronto, Calgary, Montreal,  
Winnipeg & Vancouver

Canada Permanent Trust Company  
Regina

### Listings and Symbols

Toronto and Montreal Stock Exchanges

Common Shares	NCN
First Preference A	NCNPrA
First Preference B	NCNPrB
Junior Preference	NCNPrC

### Trustees

5½ % First Mortgage Bonds due  
Feb. 1, 1980

Canada Permanent Trust Company  
Calgary

9¾ % Secured Debentures due  
April 15, 1983

Montreal Trust Company  
Toronto

10¼ % Secured Notes due Dec. 31, 1988  
The Royal Trust Company  
Toronto

11¼ % Secured Notes due Dec. 31, 1988  
The Royal Trust Company  
Toronto

11¼ % Secured Debentures due  
Aug. 15, 1996  
National Trust Company, Limited  
Toronto

### Auditors

Thorne Riddell & Co.,  
Chartered Accountants

\*Member of the Executive Committee

†Member of the Audit Committee

## OFFICES

### Executive & Registered

4600 Toronto-Dominion Centre  
 Toronto, Ontario M5K 1E5

### Natural Resources

#### Norcen Energy Resources Limited

#### Cigas Products Ltd.

#### Prairie Oil Royalties Company, Ltd.

#### Norcen Pipelines Ltd.

715-5th Avenue S.W.  
 Calgary, Alberta T2P 2X7

#### Coleman Collieries Ltd.

Coleman, Alberta T0K 0M0

### Gas Utilities

#### Northern and Central Gas Corporation Limited

245 Yorkland Boulevard  
 Willowdale, Ontario M2J 1R1

#### Gaz Métropolitain, inc.

1155 Dorchester Boulevard  
 Montreal, Quebec H3B 3S7

#### Greater Winnipeg Gas Company

265 Notre Dame Avenue  
 Winnipeg, Manitoba R3B 1N9

## Distribution of Common Shares

December 31, 1978

	Shareholders		Shares	
	No.	%	No.	%
Alberta	3,283	10.35	1,403,257	6.13
British Columbia	3,859	12.17	1,132,182	4.94
Manitoba	1,390	4.38	2,122,136	9.27
New Brunswick	387	1.22	99,449	.43
Newfoundland	107	.34	37,567	.16
North West Territories	9	.03	1,270	.01
Nova Scotia	764	2.41	396,284	1.73
Ontario	12,525	39.49	10,655,775	46.53
Prince Edward Island	95	.30	23,391	.10
Quebec	3,316	10.45	5,197,822	22.69
Saskatchewan	816	2.57	203,548	.89
Yukon	9	.03	2,377	.01
Canadian	26,560	83.74	21,275,058	92.89
U.S.A.	4,962	15.64	1,362,511	5.95
U.K.	96	.30	67,172	.29
Other Foreign	101	.32	198,240	.87
	31,719	100.00	22,902,981	100.00



**Norcen**

1978 Annual Report